**BACKGROUND**

Thyroid hormone nuclear receptors (TRs) are ligand-dependent transcription factors which regulate growth, differentiation and development, and represent members of the steroid/retinoic acid superfamily. The two genes encoding TRs identified to date, TRα and TRβ, have been mapped to human chromosomes 17 and 3, respectively. TRs bind to thyroid hormone response elements (TREs) with half-site binding motifs in the orientation of palindromes, direct repeats or inverted palindromes. The affinities of binding are both variable and influenced differentially by 3,3',5'-triiodo-L-thyronine (T3). Transcriptional regulation by TRs is also modulated by heterodimerization with TR nuclear accessory proteins, the most extensively characterized of which are the retinoid X receptors (RXRα, RXRβ, RXRγ). The TRβ isoform TRβ1 forms a complex with the PI 3-kinase p85α subunit and plays an important role in the T3-induced activation of Akt in pancreatic β cells.

**CHROMOSOMAL LOCATION**

Genetic locus: THRB (human) mapping to 3p24.2; Thrb (mouse) mapping to 14 A2.

**SOURCE**

TRβ1 (J52) is a mouse monoclonal antibody epitope mapping to the C-terminal half of the A/B domain of the thyroids hormone receptor β1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-738 X, 200 µg/0.1 ml.

**APPLICATIONS**

TRβ1 (J52) is recommended for detection of TRβ1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1:2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TRβ1 siRNA (h): sc-38890, TRβ1 siRNA (m): sc-38891, TRβ1 shRNA Plasmid (h): sc-38890-SH, TRβ1 shRNA Plasmid (m): sc-38891-SH, TRβ1 shRNA (h) Lentiviral Particles: sc-38890-V and TRβ1 shRNA (m) Lentiviral Particles: sc-38891-V.

TRβ1 (J52) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TRβ1: 55 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, SKBR-3 nuclear extract: sc-2134 or TRβ (h): 293T Lysate: sc-369818.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**DATA**

- **Select Protein**
  - TRβ1 (J52): sc-738. Western blot analysis of TRβ1 expression in non-transfected: sc-117752 (A) and human TRβ1 transfected: sc-369818 (B) 293T whole cell lysates.

**SELECT PRODUCT CITATIONS**

5. Zhang, S., et al. 2010. 5-HT2B receptors are expressed on astrocytes from brain and in culture and are a chronic target for all five conventional “serotonin-specific reuptake inhibitors”. Neuron Glia Biol. 6: 113-125.

See TRβ1 (J51): sc-737 for TRβ1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.